Method of catalytic-photocatalytic destruction of organic dyes with the participation of nanocomposites based on modified titanium dioxide includes heating and ultraviolet irradiation of a suspension of titanium dioxide with a solution of methylene blue. The destruction process is carried out in two stages, in the first of which the solution of the organic dye is heated in the presence of particles of composites based on titanium dioxide, and in the second - it is irradiated with ultraviolet light.